



UNITED STATES PATENT AND TRADEMARK OFFICE

12
UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/662,081	09/12/2003	Benjamin J. Feldman	12008.32USD1	9809

23552 7590 03/24/2005

MERCHANT & GOULD PC
P.O. BOX 2903
MINNEAPOLIS, MN 55402-0903

EXAMINER

NGUYEN, DONGHAI D

ART UNIT PAPER NUMBER

3729

DATE MAILED: 03/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/662,081

Applicant(s)FELDMAN ET AL. **Examiner**

Donghai D. Nguyen

Art Unit

3729

— The MAILING DATE of this communication appears on the cover sheet with the correspondence address —

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) 7-17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 12/15/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. This application contains claims directed to the following patentably distinct species of the claimed invention:

Species A, drawn to Figures 2 and 31, readable on claims 1-6; and

Species B, drawn to Figure 1, readable on claims 7-17.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, there is no generic claim.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the

Art Unit: 3729

examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

2. During a telephone conversation with Mara E. Liepa on March 18, 2005 a provisional election was made without traverse to prosecute the invention of **Species A**, claims 1-6.

Affirmation of this election must be made by applicant in replying to this Office action. Claims 7-17 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

3. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

The elected claims 1-6 are examined as follow:

Specification

4. The abstract of the disclosure should be directed to the elected invention of manufacturing the electrochemical sensors. Correction is required. See MPEP § 608.01(b).

5. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. The following title is suggested: --
METHOD OF MANUFACTURING ELECTROCHEMICAL SENSORS--.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5,997,708 to Craig in view of Uenoyama et al.

Regarding claim 1, Craig disclose a method of manufacturing sensors (sensor array Col. 15, lines 41-45), the method comprising steps of: forming a plurality of features (162/166) on a first region (154/314) of a substrate (foldable substrate 152/312); forming a plurality of features (162/174) on a second region (156/316) of the substrate; folding the substrate to overlay the first region and the second region (Figs. 3-4); creating a sample chamber region (Fig. 9) between the first region and the second region; and separating a plurality of sensors (Fig. 8 and Col. 17, lines 3-6). However Craig does not disclose that features are working electrode and counter electrode (even though the features could include the conductor, electrode, sensor, etc., see Col. 15, lines 41-46). Uenoyama et al teach the step of forming working and counter electrodes (2 and at surface 6) and overlay the working and counter electrodes with a sample chamber regions (3', Fig. 1) between them for forming an electrochemical sensor (Col. 6, lines 23-26). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modified the invention of Craig by forming and overlaying the working electrode and the counter electrode with the sample chamber region between them as taught by Uenoyama et al for forming the electrochemical sensors.

Regarding claim 2, Craig discloses scoring the substrate to form a score line (180/330/362) and folding the substrate along the score line (Figs. 3-6).

Regarding claim 3, Craig's Fig 5 shows the step of positioning a spacer layer (176) between the first region and the second region.

Regarding claim 4, Craig does not disclose an adhesive layer between the regions. Uenoyama et al teach the step of positioning an adhesive layer between the first region and the second region for bonding the spacer to the first and second region together (Col. 6, lines 29-34). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Craig by utilizing the adhesive layer between the first and second regions as taught by Uenoyama et al for bonding the spacer to the first and second regions together

Regarding the limitations of claim 6, Craig discloses the features (334A, 336, 340B, etc. in Figs. 7-9 or conductor, electrodes, channel, etc. in Col. 15, lines 41-46) are arranged in a specific fashion/order and at precise locations on the first (154/314) and second (156/316) regions of the substrate (152/312, see Figs. 3-9) so that when the substrate are folded at the score line, the electrical features are precisely superimposed (Col. 4, lines 20-39) to form a precise structure. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to arrange the plurality of working electrodes (features) in columns parallel to the width and in rows parallel to the length and arrange the plurality of counter electrodes (features) in columns parallel to the width and in rows parallel to the length as discloses by Craig for precise superimposed the two regions for forming the electronic components, "electrochemical sensors".

Allowable Subject Matter

8. Claim 5 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion


9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art reference cited for the teaching of manufacturing electrochemical sensors.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donghai D. Nguyen whose telephone number is (571)-272-4566. The examiner can normally be reached on Monday-Friday (9:00-6:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter D. Vo can be reached on (571)-272-4690. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DN
March 21, 2005



PETER VO
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700